CREATE A COOL OR WHITE ROOFS PROGRAM

City of St. Louis Sustainable Neighborhood Initiative


Microgrid Solar installing solar panels on a white roof for Missouri Botanical Garden

DESCRIPTION

Cool Roofs are highly reflective roofs that absorb less heat from sunlight and keep your building cooler. They allow air conditioning equipment to work less and help to maintain cooler, more constant indoor temperatures. Converting an existing roof into a cool roof most commonly involves the simple application of reflective white or cool color coating, but depending on the slope, roof material, and/or personal preference, it can also be achieved using a range of other products. A Cool Roofs Program can educate community members about Cool Roofs and provide resources to implementation, such as volunteer assistance or work days.

NEIGHBORHOOD BENEFITS

Environmental

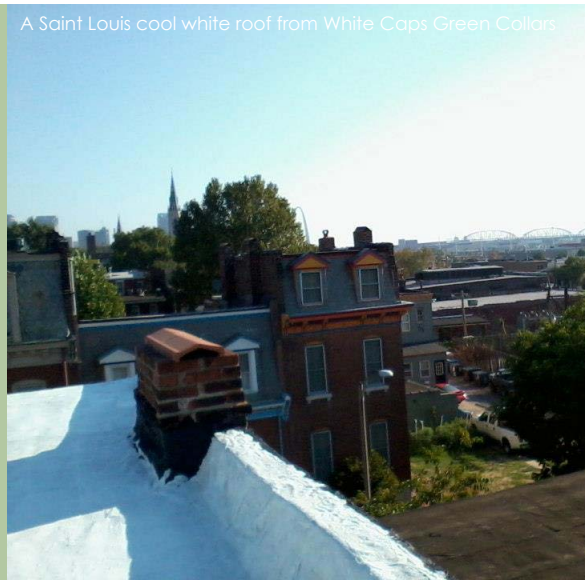
- Increased occupant comfort
- Decreased air pollution and greenhouse gas emissions
- Reduced waste associated with roof maintenance
- Reduced contribution to the community's Urban Heat Island Effect

Social

- Safer and more energy efficient homes
- Reduced risk of heat-related illnesses and deaths
- Reduced cost of comfortable living in hot weather
- Reduced stress on the power grid

Economic

- Reduced utility bills associated with air conditioning
- Smaller and longer-lasting air conditioning systems
- Lower roof maintenance costs and wastes
- Federal Energy Star tax credits on qualifying products


A Saint Louis cool white roof from White Caps Green Collars


A demonstration green roof Photo courtsey of Missouri Botanical Garden

RELATED TOOLS

When paired with other tools,creating a cool roofs program can contribute to a greater, healthier, and more energy efficient neighborhood. Think about individual prosperity, public health, and air quality. Try combining this tool with

- **Hold a Neighborhood Energy Challenge**
- **Create a Community Tool Library**
- **Secure Vacant Buildings**
- **Preserve Existing Buildings**
- **Conduct a Weatherization Training Program**

EXAMPLES

'Painting Sustainability', Forest Park Southeast, St. Louis, MO
A 2013 Sustainable Neighborhood Small Grant Competition winning program to help fund Cool Roof projects.

White Roof Project, New York, NY
A nonprofit that pairs sponsors with buildings in need of cool roofs.

Coolest Block Contest, Philadelphia, PA
A 2010 competition to promote energy efficiency at the block scale.


Typical Saint Louis tar roofs

GET STARTED

1. **Organize** Create a planning committee for your new Cool Roofs Program. Choose people for specific tasks such as leader, fund-raising, secretary, construction, communication, etc.

2. **Research** Research existing **Cool Roof Programs** in other cities such as **Philadelphia's Coolest Block Contest**, and find out what organizing structure ensures multiple successful cool roof retrofits. Learn about the **benefits** of cool roofs at the **EPA website, Energy Star, coolroofs.org,** or local **roofing businesses**. Learn about methods of subsidizing the cost of a cool or energy efficient roof using the information at the **Federal Tax Credits for Consumer Energy Efficiency website, Set The PACE St. Louis,** and the **Affordable Housing Commission.**

3. **Know the Types** In general, there are four general types of products that are common for cool roof retrofits:
   - Coatings for low or steep sloped roofs
   - Single-ply membranes for low slope roofs
   - Reflective tiles for low and steep slope roofs
   - Metal for low or steep slope roofs.

4. **Prepare** Determine if you or volunteers in your neighborhood have the skills, tools, and qualifications to safely and effectively install the proper cool roof. The most user friendly of the four types listed above is Coatings. If installing an elastomeric roof coating, which is similar to a roof grade paint, there is a good chance you and your neighbors can get the job done. Basic steps for installing an elastomeric coating are:
   - Clean your roof of all debris using a leaf blower or broom
   - Pressure wash the roof to remove dirt, stains, and mold using a pressure washer or garden hose.
   - Fix cracks, peeling, and blisters with sealer, reinforcer, and patching fabric.
   - Apply the elastomeric roof coating over the whole roof using rollers or sprayers.

   Tutorials and detailed **how to guides** can be found online, and local hardware stores may be able to give you more information. If you do not have the skills or tools, hire a local roofing business for you and your neighbors, perhaps at a discounted price for a group rate.

5. **Install** Follow the application instructions of your roofing material carefully. Remember that many paints require multiple days of warm, rain-free weather and the painted surface to be scrubbed clean to effectively and durably coat your roof. Schedule enough time to prepare the surface and be aware that you may need to set a rain date.

6. **Maintain** Set aside time each year to clean and maintain your new roof.

OPPORTUNITIES

1. **Monitor** Track your utility cost savings and find creative ways to document and inform your community about the benefits of Cool Roofs. Hold events with residents, local businesses, property owners, and environmental experts to discuss the economic and environmental impacts of applying cool roofs to more houses, schools, and businesses.

2. **Publicize** Create a block or neighborhood wide **Energy Challenge** to encourage tracking of utilities and long term success.

3. **Educate** Provide training for roof retrofits to neighborhood residents.


Reflective roof in St. Louis

RELATED SUSTAINABILITY PLAN CATEGORIES

This tool supports the following goals and strategies:

Urban Character, Vitality & Ecology
Strategies B7-Encourage communities to improve their own neighborhood; F1-Preserve and reuse buildings as a means of achieving sustainability; F4-Protect historic residential and commercial properties vulnerable to foreclosure, tax forfeiture, or demolition; F5-Promote redevelopment of historic homes and commercial properties; F8-Promote public engagement in the historic preservation movement; G6-Experiment with new ways to raise funds and build partnerships to build sustainable and affordable housing.

Infrastructure, Facilities & Transportation
Strategies: G2-Strive for the highest levels of energy efficiency and maximize the deployment of clean energy solutions in buildings.

Education, Training & Leadership
Strategies: E1-Educate and empower citizens in methods of being environmentally sustainable.

Prosperity, Opportunity & Employment
Strategies: B2-Encourage small scale redevelopment and economic incentives.

For the most current examples, updated tools, and information, visit the City's Sustainable Neighborhood Initiative website:

SUSTAINABLENEIGHBORHOOD.NET